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Krister Hansson

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EXAMINER

TOLIN, MICHAEL A

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/580,219
Filing Date: June 28, 2006
Appellant(s): HANSSON ET AL.

Thomas P. Pavelko
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 14 September 2010 appealing from the Office action mailed 20 November 2008.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims Pending: 1, 2, 4, 6-9, 16 and 17

Claims Rejected and on Appeal: 1, 2, 4, 6-9, 16 and 17

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,565,919	HANSSON ET AL	5-2003
2002/0077384	SANO ET AL	6-2002
2,816,851	ARLEDTER	12-1957
2002/0007909	MOTT ET AL	1-2002
2003/0039810	SCHULZ ET AL	2-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

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Claims 1, 2, 4, 6, 7, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over HANSSON in view of SANO, and further in view of either one of ARLEDTER or MOTT.

HANSSON teaches a method of making a decorative laminate comprising the steps of providing a base layer, printing a decorative layer on the base layer, applying a wear layer impregnated with melamine-formaldehyde resin, and bonding the layers together in a press with heat and pressure (Abstract; the Figure; column 2, lines 28-46; column 10, lines 2-3; claim 20; column 4, lines 4-14).

HANSSON differs from claim 1 in that:

- i. HANSSON uses melamine-formaldehyde as the thermosetting resin for the wear layer rather than phenol-formaldehyde or urea formaldehyde.
 - ii. HANSSON does not teach a printing ink comprising an amino resin.
 - iii. HANSSON does not recite increasing the bonding.
- i. It is noted that HANSSON does not place any criticality on the use of a particular resin for the wear layer. HANSSON broadly teaches that the wear layer may comprise one or more sheets of α -cellulose impregnated with thermosetting resin or lacquer (column 1, lines 64-67; column 2, lines 1-2). While HANSSON suggests melamine formaldehyde as a suitable resin, phenol formaldehyde or urea formaldehyde resins are also known as suitable for the wear layer of a decorative laminate. For example, ARLEDTER suggests phenol formaldehyde as an alternative to melamine formaldehyde as the resin of the overlay sheet, the outermost sheet which acts as a wear layer (column 3, lines 19-28). MOTT indicates that a wear layer may be provided as a

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plurality of α -cellulose sheets impregnated with urea formaldehyde as an alternative to melamine formaldehyde (paragraphs 29-31). It would have been obvious to one of ordinary skill in the art at the time of the invention to use phenol formaldehyde or urea formaldehyde as the impregnating resin of the wear layer in HANSSON because one of ordinary skill in the art would have been motivated to use known suitable alternatives to melamine formaldehyde in view of ARLEDTER or MOTT.

ii. It is noted that HANSSON prefers inkjet printing, but does not specify particular ink compositions. Accordingly one of ordinary skill in the art would have been motivated to look to the prior art for inkjet ink compositions. SANO teaches ink compositions for inkjet printing which possess excellent printing stability, ejection stability, storage stability, and color reproduction (Abstract). SANO's ink composition includes, among other components, a resin. Among the preferred resins are amino compounds, such as melamine resin, melamine-formaldehyde resin, amino alkyd co-condensation resin, and urea resin (paragraph 48). It would have been obvious to one of ordinary skill in the art at the time the invention to provide HANSSON with a printing ink comprising an amino resin because one of ordinary skill in the art would have been motivated to provide HANSSON with an inkjet ink having excellent printing stability, ejection stability, storage stability, and color reproduction in accordance with the teachings of SANO.

iii. Regarding the claimed improvement in bonding, Appellant's specification explains at the bottom of page 1 to the top of page 2 that improved bonding results from the presence of amino resin mixed into the printing ink. SANO clearly suggests an ink composition having amino resin mixed therein. Since SANO teaches substantially the

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same ink composition as the claim, it can reasonably be expected that the claimed improvement in bonding naturally flows from the use of an ink composition comprising amino resin in accordance with the teachings of SANO.

Regarding claim 2, SANO teaches amino alkyd co-condensation resin (paragraph 48). Such a resin satisfies both the claimed limitation of an amino resin and limitation of an alkyd based ink. To the extent that claim 2 requires distinct amino and alkyd resin components, SANO teaches an alkyd resin (paragraph 48) in combination with a preferred additional resin selected from a relatively short list of resins which includes several amino resins (paragraph 63).

Regarding claim 4, among the resins taught by SANO is melamine-formaldehyde resin, and SANO desires resins having a molecular weight in the range of 3000 to 50,000 (paragraphs 44, 48). A melamine formaldehyde resin with a molecular weight in this range includes the connection of melamine units by ether linkages, thus satisfying the claimed etherified amino resin.

HANSSON clearly teaches or suggests the limitations of claims 6, 7, 16 and 17 (column 2, lines 53-60; Abstract; claim 20; column 3, lines 54-67; column 4, lines 1-4).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over HANSSON in view of SANO, and further in view of either one of ARLEDTER or MOTT as applied to claims 1, 2, 4, 6, 7, 16 and 17 above, and further in view of SCHULZ.

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HANSSON teaches that it is advantageous to print the upper side of the core after the core is provided with edges intended for joining in order to reduce waste and improve matching tolerances (column 1, lines 60-63; column 2, lines 53-60).

HANSSON differs from the claims in that HANSSON prepares the core for printing by sanding and priming rather than by bonding a paper layer to the core prior to printing (column 10, lines 1-3). While HANSSON provides a suitable surface by sanding and priming, it is generally well known in the art of decorative laminates to provide a paper layer as a suitable surface for printing. For example, SCHULZ teaches a paper layer suitable for inkjet printing and incorporation into decorative laminates (Abstract; paragraphs 1-5, 12-14, and 20). SCHULZ teaches that the paper provides good printing properties, low ink consumption, good image definition, and high color density (paragraph 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a paper layer for receiving the printing in HANSSON because one of ordinary skill in the art would have been motivated to achieve good printing properties, low ink consumption, good image definition, and high color density in accordance with the teachings of SCHULZ. Regarding the limitation of bonding the base layer prior to printing, this is the expected manner of using the method of HANSSON as modified by SCHULZ because HANSSON teaches printing on the upper side of the core as part of a process to reduce waste and improve matching tolerances, as noted above. As to the limitation of bonding the base layer, one of ordinary skill in the art would have been expected to appreciate that the base layer cannot be merely laid down on the core or it could become easily displaced before or during the printing

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operation. Bonding is well known as a means of attaching a flexible material to a base so that the flexible material stays in a desired orientation. It would have been obvious to one of ordinary skill in the art at the time of the invention to bond the paper layer to the core because one of ordinary skill in the art would have been motivated to use any well known suitable method for attaching the paper to the core in order to avoid the paper becoming displaced before or during the printing operation.

(10) Response to Argument

Appellant argues the claimed increase in bonding is neither inherent nor obvious by the use of SANO's printing ink in the process of HANSSON. In particular, Applicant argues that HANSSON uses melamine formaldehyde for the wear layer instead of the claimed phenol formaldehyde, urea formaldehyde or mixtures thereof. In response, the examiner acknowledges that HANSSON suggests melamine formaldehyde as the thermosetting resin for the wear layer. However, either one of ARLEDTER or MOTT was applied to suggest that it is known in the art to use either phenol formaldehyde or urea formaldehyde as a substitute for melamine formaldehyde in decorative laminate wear layer applications. ARLEDTER explains that the use of melamine formaldehyde and phenol formaldehyde resins is typical in the art (column 3, lines 25-28). As suggested resins, MOTT provides a very short list, i.e. melamine formaldehyde, urea formaldehyde, urethane, acrylic or maleamide (paragraph 29). The examiner's position is that no more than the level of ordinary skill in the art is involved in selecting known suitable thermosetting resins as the wear layer for a decorative laminate from such a

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relatively small list of materials typically used in the art. As to the claimed increase in bonding, SANO suggests a printing ink having the claimed amino resin. As pointed out in the rejection above, Appellant's specification indicates that the increase in bonding is due to the presence of this amino resin. For this reason, the examiner has taken the position that the claimed increase in bonding naturally flows from using such an ink in the process of HANSSON as modified by either one of ARLEDTER or MOTT. Appellant has not provided any evidence to the contrary.

Appellant argues there is no disclosure in HANSSON or SANO of the claimed increase in bonding. The examiner does not dispute this argument. However, as noted above, this limitation is considered to naturally flow from the process of HANSSON as modified by SANO and either one of ARLEDTER or MOTT.

Appellant argues that using the ink of SANO in the process of HANSSON involves contacting the ink with melamine formaldehyde. This argument is not persuasive for the reasons provided above. Either one of ARLEDTER or MOTT was applied for suggesting the claimed thermosetting resin as a substitute for melamine formaldehyde.

Appellant argues the examiner is not permitted to utilize any portion of Appellant's own specification as a teaching. In response, the examiner is required to read the claims in light of the specification. The examiner has pointed to Appellant's specification to show that the claimed increase in bonding is a property which naturally flows from the use of an amino resin containing ink in the process of HANSSON as modified by either one of ARLEDTER or MOTT. The motivation to use SANO's ink

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comes directly from HANSSON and SANO. As pointed out in the rejection above, HANSSON prefers the use of inkjet printing and SANO provides an ink jet printing ink which possesses excellent printing stability, ejection stability, storage stability and color reproduction. The fact that Applicant has identified another advantage, i.e. increased bonding, cannot be the basis for patentability because this property naturally flows from the use of such ink in the method of HANSSON as modified by either one of ARLEDTER or MOTT. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Appellant argues neither one of ARLEDTER or MOTT provides a wear layer in contact with a printing ink as a decorative layer. As a result, Appellant argues that neither one of these references would have experienced the problems of delamination noticed by Appellant. The examiner again acknowledges that none of the applied prior art teaches the claimed increase in bonding as a result of using the claimed printing ink containing an amino resin. Either one of ARLEDTER or MOTT was applied for suggesting that phenol formaldehyde and urea formaldehyde are commonly used alternatives to the melamine formaldehyde thermosetting resin used by the primary reference to HANSSON as a wear layer. The primary reference to HANSSON was relied upon for the claimed limitations of printing a decorative layer on a base layer and applying a resin impregnated wear layer to the base layer. As set forth above, the examiner has taken the position that the claimed increase in bonding naturally flows

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from using SANO's printing ink in the process of HANSSON as modified by either one of ARLEDTER or MOTT. Appellant has not provided any evidence to the contrary.

Appellant argues the examiner has confused obviousness with inherency. The examiner respectfully disagrees. As set forth above, either one of ARLEDTER or MOTT provides clear motivation to use phenol formaldehyde or urea formaldehyde as an alternative to the melamine formaldehyde thermosetting resin wear layer suggested by the primary reference to HANSSON. SANO provides clear motivation to use an amino resin containing inkjet printing ink for the preferred formation of a decorative pattern by inkjet printing taught in HANSSON. The examiner has acknowledged that none of these references recite the claimed increase in bonding. However, the examiner has taken the position that such increase in bonding naturally flows from using SANO's ink in the process of Hanssen as modified by either one of ARLEDTER or MOTT. The examiner does not agree that the claims are patentable for the failure of these references to recognize the advantage noted by Appellant, i.e. increased bonding. The fact that Applicant has noticed another advantage in using an amino resin containing ink in the modified process of HANSSON cannot be the basis for patentability because the prior art of record already establishes motivation for using SANO's amino resin containing ink in the process of HANSSON as modified by either one of ARLEDTER or MOTT.

Appellant argues SANO does not teach a printing ink in contact with phenol formaldehyde, urea formaldehyde or mixtures thereof. This argument is not persuasive for the reasons provided above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Michael A Tolin/
Primary Examiner, Art Unit 1791

Conferees:

Richard Crispino

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791

/Benjamin L. Utech/
Primary Examiner